Claims

We claim:

1 1. A method for encoding an inter-frame of a compressed video, the inter-frame
2 including a plurality of macroblocks in a predetermined order, each macroblock
3 having an associated motion vector, comprising:
4   identifying, for each current macroblock in the predetermined order, a set of
5 near macroblocks;
6   assigning an index to each near macroblock;
7   determining a difference between the motion vector of the current
8 macroblock and the motion vector of each near macroblocks;
9   sorting the indices of the near macroblocks in order of the differences;
10   appending the sorted indices to the inter-frame.

1 2. The method of claim 1, in which the set of near macroblocks are immediately
2 adjacent to the current macroblock.

1 3. The method of claim 2, in which macroblocks immediately adjacent to the set of
2 near macroblocks are included in the set.

1 4. The method of claim 1, in which the order is a raster scan order.

1 5. The method of claim 1, in which the difference is in terms of a mean squared
2 error.

1 6. The method of claim 1, in which the difference is in terms of an absolute error.

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1   7. The method of claim 1, in which the sorted indices are identified by a separation

2   code in the inter-frame.

1   8. The method of claim 1, further comprising:

2   transmitting the inter-frame through a noisy channel;

3   decoding the transmitted inter-frame;

4   detecting a lost macroblock in the decoded inter-frame;

5   reading the sorted indices corresponding the lost macroblock;

6   concealing the lost macroblock by one of the motion vectors identified in the

7   sorted indices.

1   9. The method of claim 8, in which the one motion vector is a received motion

2   vector with a smallest difference to the motion vector of the lost macroblock.

1   10. The method of claim 1, in which macroblocks along edges of the inter-frame

2   are replicated adjacently on an outside of the inter-frame to facilitate processing of

3   edge blocks of the current macroblock.